

A New Rotifer of the Melicertan Family.

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(Plate XXVII.)

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I have the pleasure of introducing an interesting addition to the Rotiferæ of Queensland, and, in all probability, to that of the world. The discovery is really due to a Brisbane lady, Miss Bursdorff, so I have named it *Melicerta bursdorffæ*.

The Rotifers, or Wheel Animalcules, are a group of minute, highly-organised, and interesting animals. Hudson and Gosse divided them into four sections, and in the first the Rhizota, or those which are rooted or fixed in one place, the subject of our paper, finds its appropriate place. It is attached to the filamentous leaves of a *Utricularia*, one of our well-known insect-eating plants, and is only to be found towards the end of autumn. It measures, when extended, one-tenth of an inch, so that it is just visible to the naked eye. The large, four-leaved corona, spreading like a white lily, is its most conspicuous feature. It sways back and forward, a perfect living flower. The double lines of cilia, bordering the lobes, are always in active operation, sending a swift current along the channel between bearing food to the mouth. Under the microscope the tiny jaws of the malleo-ramate type are seen to open, and close, once every second. Just above the stomach are two gastric glands, and behind lies the ovary. The eggs, large, oval, and dark in colour, are extruded through the anus and retained by a mucous attachment around the mouth of the aperture until they are hatched, as many as five being observed clustered on one specimen. From the anus tapers a long transparent foot, which suddenly contracts near the base to a firm tube which is imbedded in the substance of the plant.

The animal is of a composite character. The head is decidedly Melicertan. The foot is that of a *Floscule*, and structurally it resembles the *Megalotrocha*. In the light of accumulating facts it is evident that a revision of the group is needed, but the pronounced head renders the *Melicerta* the most suitable family for its reception at present. I forwarded specimens to Mr. J. Shepherd, of Victoria, a gentleman who has given special attention to Rotifers, and he has supplied me with a good deal of information, and a table showing the points of likeness and disagreement with the other genera of the group. Thus the new animal agrees with two generic characters in *Lacinularia* and *Megalotrocha*, and with only one in *Melicerta*—viz., four lobes. The absence of the pellet-forming organs and secreting tubes leads it away from *Melicerta* and places it nearer *Megalotrocha*. The specific characters may be given: Corona large and four-lobed, dorsal gap minute, ventral antenna very

small, dorsal antennæ possibly absent, occurring singly, length 2.4 mm., breadth .37, corona .5 mm. wide, .7 mm. deep. Four flame cells showing through corona on either side. Pellet or gelatinous tube absent, foot contracted suddenly to short terminal rod.

—	Corona.	Dorsal Gap.	Antennæ Ventral	Antennæ Dorsal.	Clusters with Tubes.	Clusters without Tubes.	Opaque Warts.
<i>Melicerta</i> ..	Four-lobed	Wide ..	Obvious ..	Minute ..	None ..	None ..	None
<i>Lacinularia</i>	Heart-shaped, oblique, long	Minute ..	Absent or minute	..	Adhering gelatinous tubes	None ..	None
<i>Megalotrocha</i>	Kidney-shaped	Minute ..	Absent or minute	..	None	None ..	Four
New Species	Four equal lobes	Minute ..	Minute ..	Absent ..	None ..	None ..	None

The best-known of the Group is *Melicerta ringens*, which has been known for over a hundred years. It forms an interesting microscopic object to all lovers of aquatic life. Judge Bedwell wrote a lengthy description, and in Hudson and Gosse's great work it is most beautifully delineated and charmingly described.

Another member of the family is *Melicerta tubicularia*. I got a specimen in the Enoggera Reservoir ten years ago, but have not seen one since. It is enclosed in a gelatinous cell, and is distinguished by two long antennæ.

In a pool at Goodna I found another form, which I think has never been described before, and I named it *Melicerta coloniensis*. It was distinguished by each member possessing two brilliant red eyes. They gleamed like a pair of rubies, and formed an exquisite sight under dark ground illumination.

Another species found is *Melicerta conifera*. Its tubes are conical in shape, and young ones frequently attach themselves to the tubes of other specimens for support.

Another variety I have seen occasionally is *Melicerta janus*. It forms a tube of oval pellets, but these are formed in the intestines.

These examples will show you how much the subject of this paper differs from the other known members, and that it forms a very interesting addition to the group.

REFERENCES.

- Hudson, C. T., and Gosse, P. H., 1889. "The Rotatoria or Wheel Animalcules," 2 vols., London.